Fig.1A

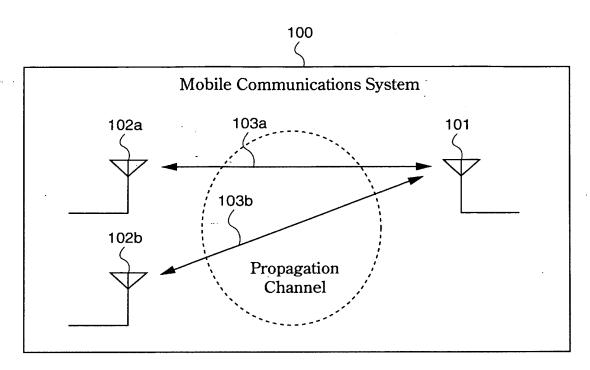


Fig.1B

Frequency Spectrum

Power

Frequency

Frequency

Fig.1C

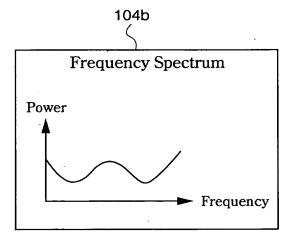
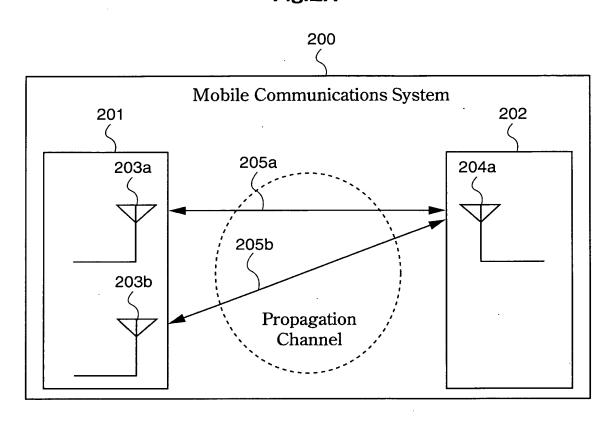


Fig.2A



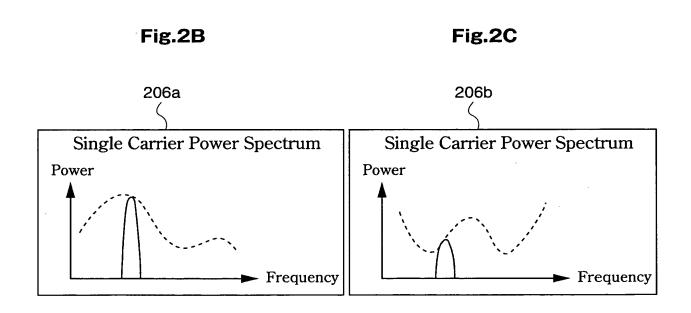


Fig.3

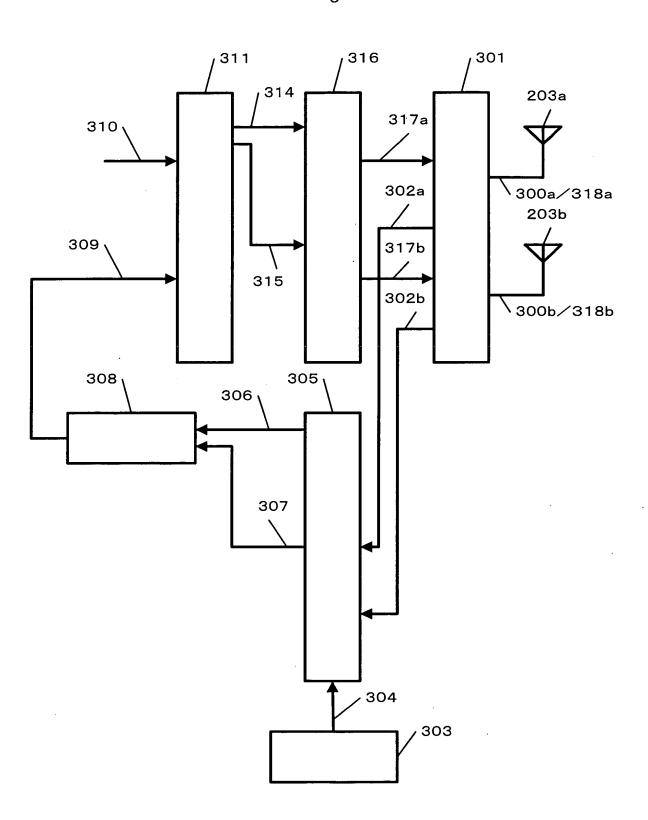
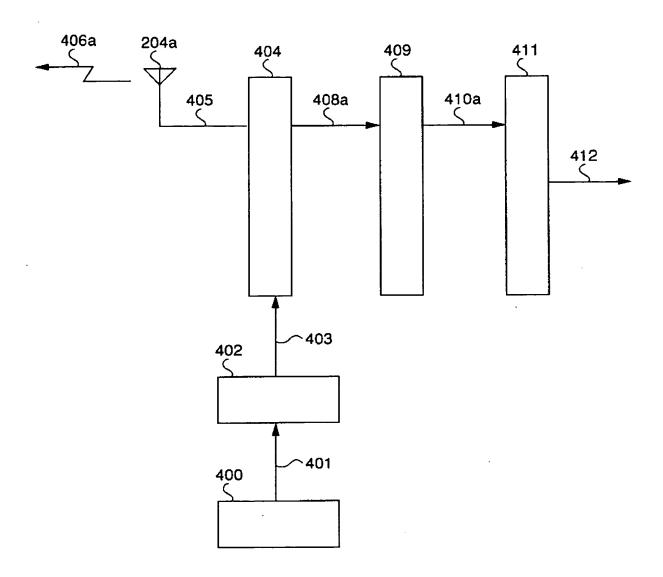
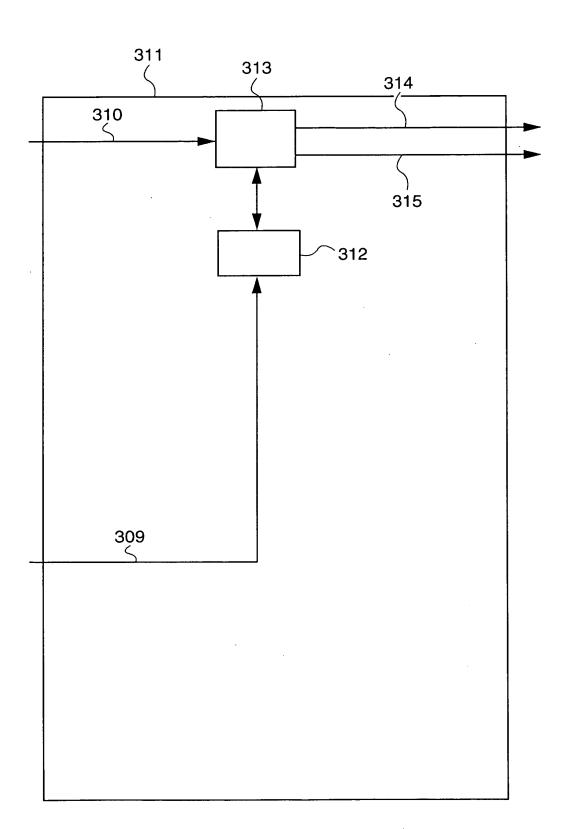


Fig.4



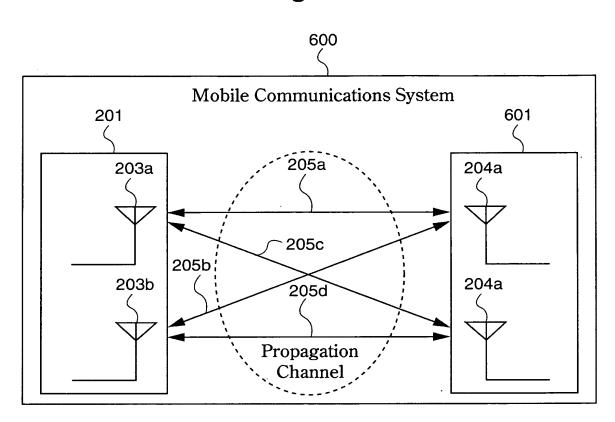
10/520000

Fig.5



Our Ref.: MAT-8645US; Customer No. 23122

Fig.6A



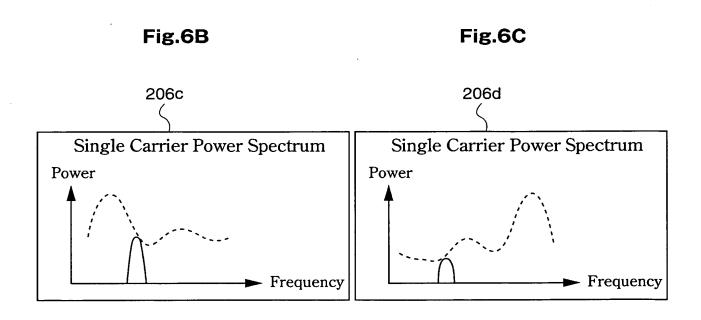
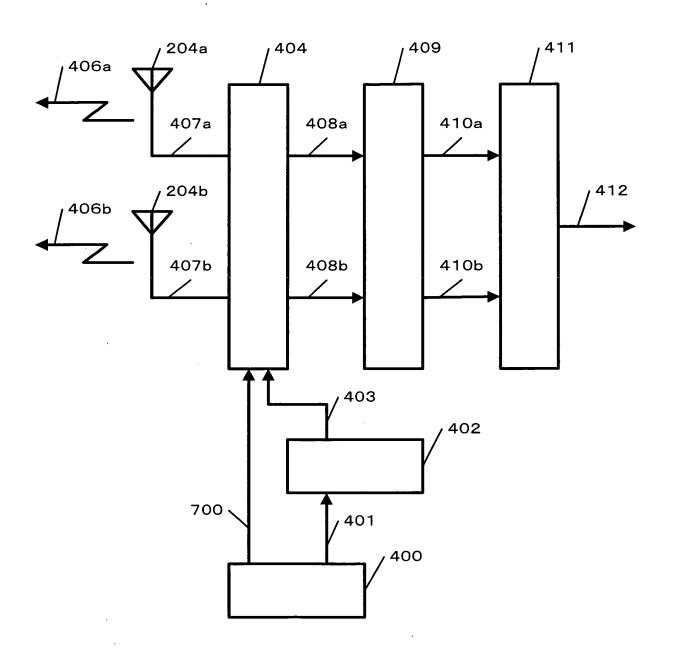
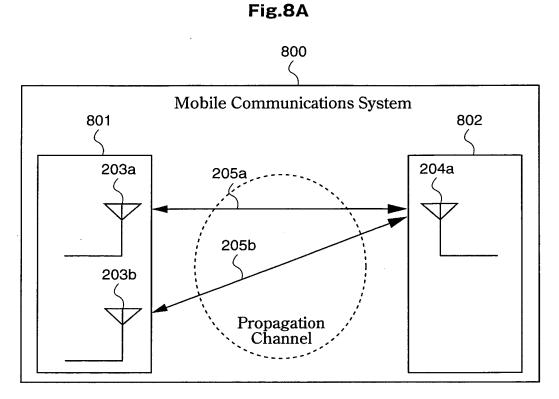
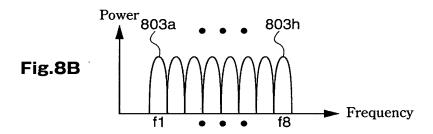


Fig.7





**Sub-carrier Elements** 



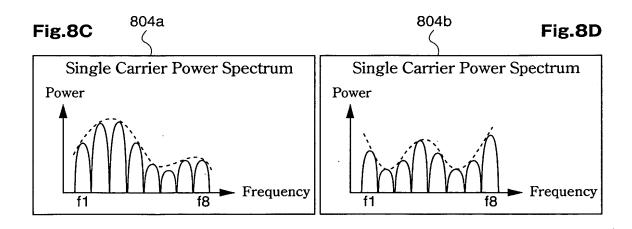
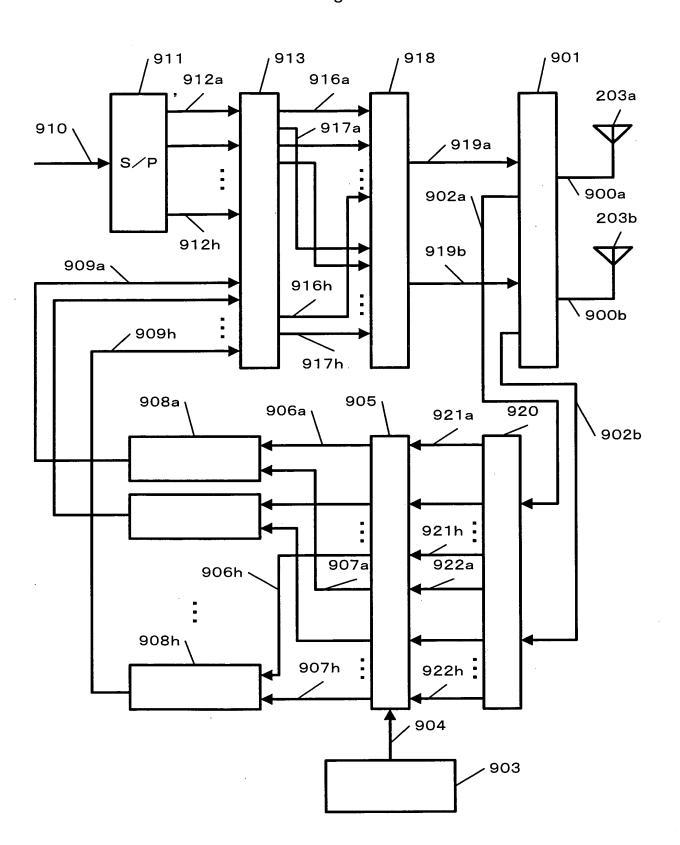


Fig.9



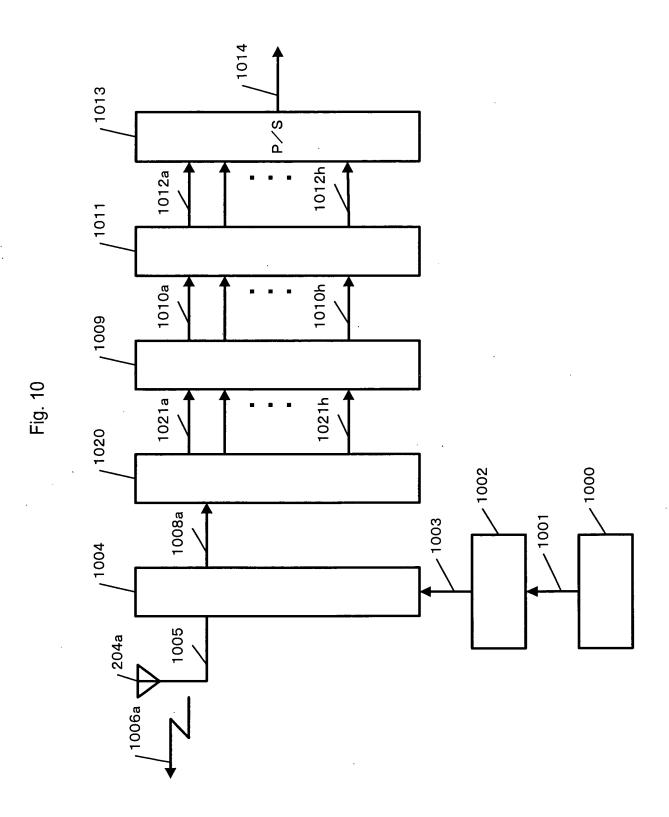
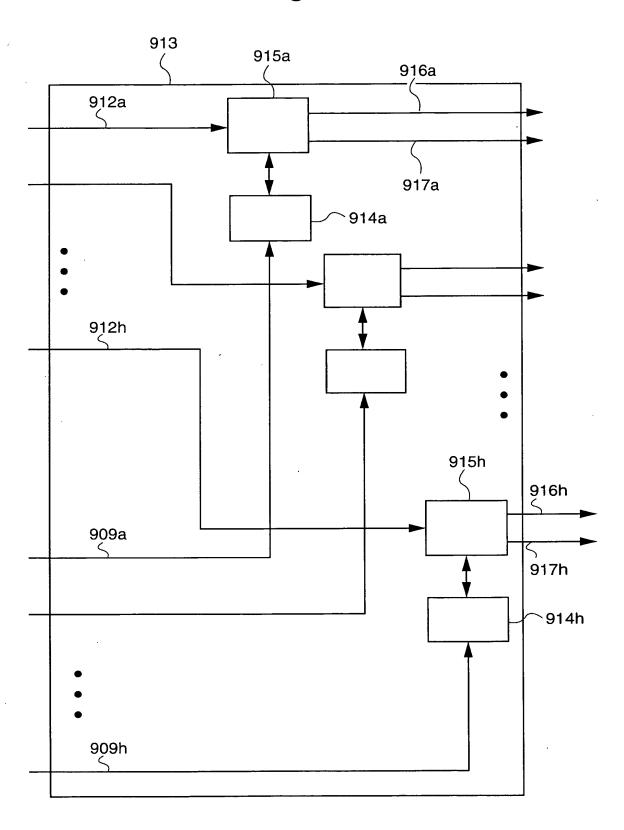


Fig.11



Our Ref.: MAT-8645US; Customer No. 23122

Fig. 12A

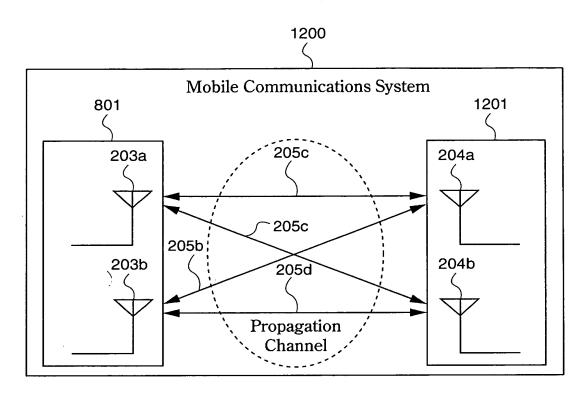
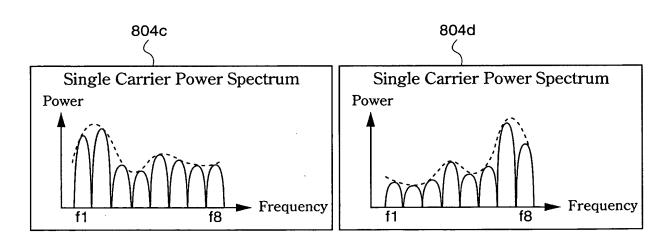


Fig. 12B

Fig.12c



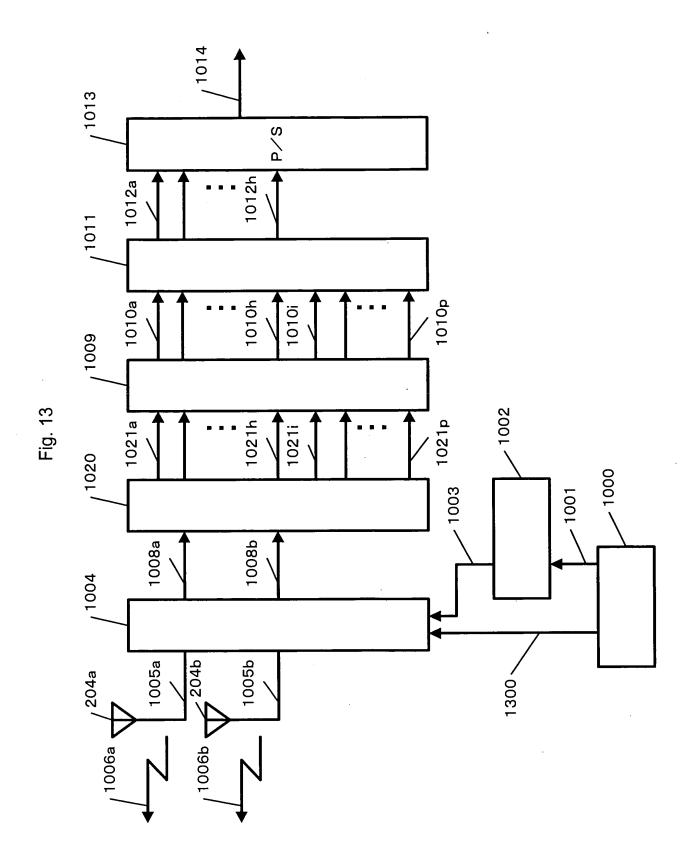
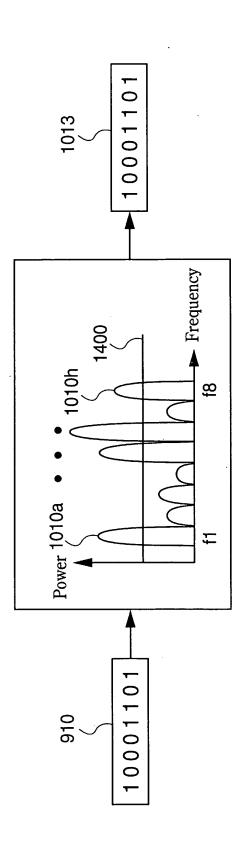


Fig. 14



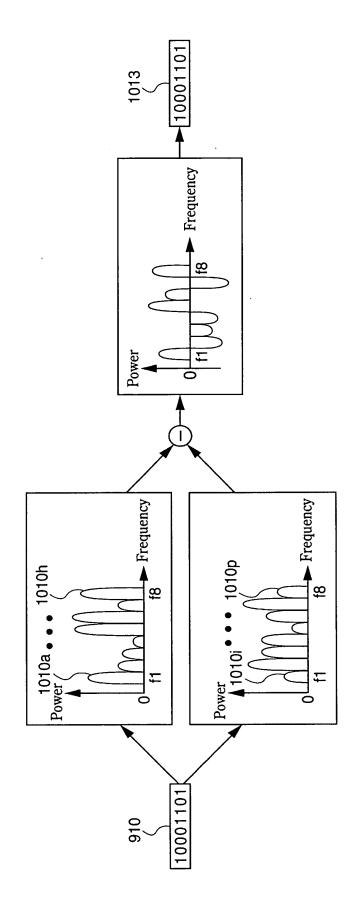


Fig.16

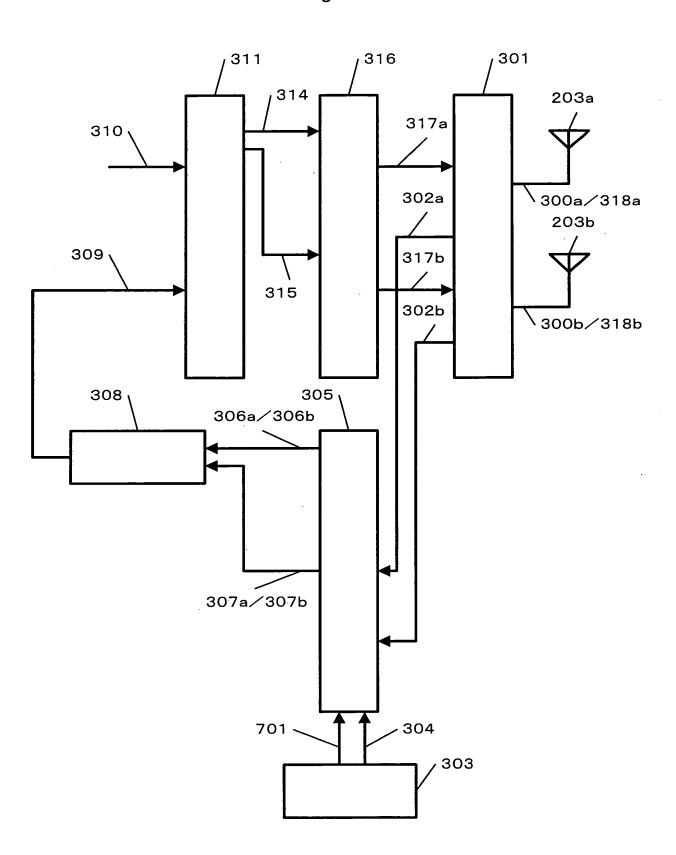


Fig.17

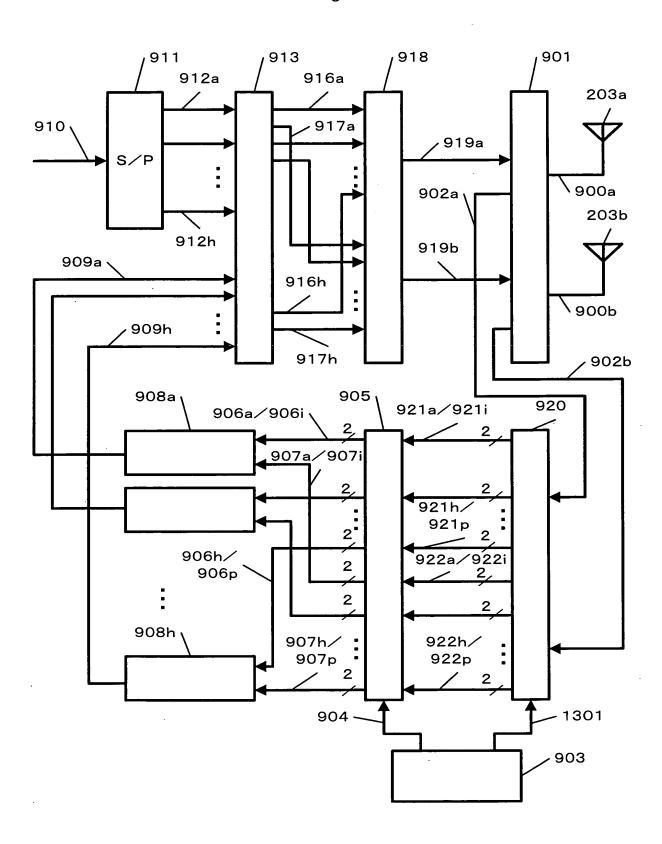


Fig. 18A

| Information to be Transmitted | Transmission Symbol Vector                              |   |  |
|-------------------------------|---|---|--|
| 1                             | $\mathbf{v} \cdot \begin{bmatrix} 1 \\ 0 \end{bmatrix}$ | $\mathbf{v} \cdot \begin{bmatrix} 1 \\ 1 \end{bmatrix}$ |  |
| 0                             | $\mathbf{v} \cdot \begin{bmatrix} 0 \\ 1 \end{bmatrix}$ | $\mathbf{v} \cdot \begin{bmatrix} 0 \\ 0 \end{bmatrix}$ |  |

Fig. 18B

| Information to be Transmitted | Transmission Symbol Vector                                   |  |  |  |
|-------------------------------|--|--|--|--|
| 1                             | $\mathbf{V} \cdot \begin{bmatrix} 1 \\ 0 \\ 0 \end{bmatrix}$ | $\mathbf{V} \cdot \begin{bmatrix} 1 \\ 1 \\ 0 \end{bmatrix}$ | $\mathbf{V} \cdot \begin{bmatrix} 1 \\ 0 \\ 1 \end{bmatrix}$ | $\mathbf{V} \cdot \begin{bmatrix} 1 \\ 1 \\ 1 \end{bmatrix}$ |
| 0                             | $\mathbf{v} \cdot \begin{bmatrix} 0 \\ 1 \\ 1 \end{bmatrix}$ | $\mathbf{V} \cdot \begin{bmatrix} 0 \\ 0 \\ 1 \end{bmatrix}$ | $\mathbf{V} \cdot \begin{bmatrix} 0 \\ 1 \\ 0 \end{bmatrix}$ | $\mathbf{v} \cdot \begin{bmatrix} 0 \\ 0 \\ 0 \end{bmatrix}$ |

Fig. 19

| Information to be<br>Transmitted | Transmission Symbol Vector                                |  |
|----------------------------------|---|--|
| 10                               | $\mathbf{H}^+ \cdot \begin{bmatrix} 1 \\ 0 \end{bmatrix}$ |  |
| 01                               | $\mathbf{H}^+ \cdot \begin{bmatrix} 0 \\ 1 \end{bmatrix}$ |  |
| 11                               | $\mathbf{H}^+ \cdot \begin{bmatrix} 1 \\ 1 \end{bmatrix}$ |  |
| 00                               | $\mathbf{H}^+ \cdot \begin{bmatrix} 0 \\ 0 \end{bmatrix}$ |  |

